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EXAMINER

WEINMAN, SEAN M

ART UNIT

PAPER NUMBER

2115

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/741,675	Applicant(s) LOUKIANOV ET AL.	
	Examiner Sean Weinman	Art Unit 2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/19/03 4/20/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claims 1-26 are presented for examination.

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Claim Objections

Claim 9 is objected to because of the following informalities:

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- *Claim 9* recites “the program clock frequency, and.” In line 2 of the respective claim. It is believed that the period after and should be a comma and recited as “the program clock frequency, and,” and will be treated as such for the remainder of the office action.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

15

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention.

20

Claims 3 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation “a system frequency” in line 1 of the respective claim. It is unclear whether this is intended to be the same as or different from the “system frequency” recited in line 4 of claim 1.

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Claim 6 recites the limitation “a program clock frequency” in line 1 of the respective claim. It is unclear whether this is intended to be the same as or different from the “program clock frequency” recited in line 2 of the claim 1. Additionally, claim 6 recites the limitation “a system frequency” on line 2 of the respective claim. It is unclear whether this is intended to be the same as or different from the “system frequency” recited in line 4 of claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

10 A person shall be entitled to a patent unless –

 (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 8, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by
15 Itakura et al. (US Patent No. 6,493,832).

As per claim 1, Itakura et al. teach the claimed invention comprising:

 sampling a program clock frequency at which information is sent over a communication
link (*Col. 4 lines 50-63 and Col. 6 lines 22-31 and lines 42-52*);

 sampling a system frequency related to the communication link (*Col. 4 lines 50-63 and*
20 *Col. 6 lines 42-52*);

 computing a result based on the sampled program clock frequency and the sampled
system frequency (*Col. 4 lines 50-63 and Col. 6 lines 42-52*); and

 transmitting the result over the communication link (*Col. 4 lines 50-63 and Col. 6 lines*
42-52) .

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As per claim 2, Itakura et al. teach the claimed invention comprising:

the sampling a sending frequency includes: sampling a value of a counter counting the program clock frequency at a beginning and an end of a sampling interval (*Col. 6 lines 22-31 and lines 42-52*).

5 *As per claim 3*, Itakura et al. teach the claimed invention comprising:

the sampling a system frequency includes: sampling a value of a counter counting the system frequency at a beginning and an end of a sampling interval (*Col. 6 lines 42-52*).

As per claim 8, Itakura et al. teach the claimed invention comprising:

10 sampling a program clock frequency at which information received over a communication link is played (*Col. 4 lines 50-63 and Col. 6 lines 22-31 and lines 42-52*);

 sampling a system frequency related to the communication link; computing a first value based on the sampled program clock frequency and the sampled system frequency (*Col. 4 lines 50-63 and Col. 6 lines 42-52*);

 receiving a second value via the communication link (*Col. 6 lines 42-52*); and

15 adjusting the program clock frequency based on the first value and the second value (*Abstract and Col. 4 lines 50-63 and Col. 6 lines 22-31 and lines 42-52*).

As per claim 13, Itakura et al. teach the claimed invention comprising:

the second value indicates a sending frequency at which the received information is transmitted (*Col. 6 lines 42-52*).

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

5 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10 *Claims 4-7, 9-12, and 14-26* are rejected under 35 U.S.C. 103(a) as being unpatentable over Itakura et al. (US Paten No. 6,493,832) in view of Kawabata et al. (US Patent Application Publication 203/0018983).

15 *As per claim 4 and 9*, Itakura et al. teaches the claimed invention for all of the reasons stated above. However, Itakura et al. does not explicitly teach calculating a different in the program frequency and a difference in the system frequency. Specifically, Itakura et al. teaches sampling a program clock frequency and a system frequency. Additionally, Itakura et al. teach calculating a result based on the samplings and transmitting the result over the link and adjusting the programs clock frequency by the calculation. Itakura et al. does not explicitly teach the method of calculating a result based on the samplings.

20 Kawabata et al. teaches a data transmitting system that samples the program clock frequency and system frequency and then calculates a result based on the samplings. Kawabata et al. teach the claimed invention comprising calculating a first difference value related to the program clock frequency, and calculating a second difference value related to the system frequency (*Kawabata et al. teach the claimed invention in paragraphs [0176]-[0184] and Itakura et al. teach the claimed invention in Col. 8 line 61 – Col. 10 lines 24*). In summary, 25 Kawabata et al. teach a system which calculates a difference in the program frequency and a difference in the system frequency and then calculates a result of based on those samplings.

It would have been obvious to combine the teachings of Itakura et al. and Kawabata et al. because they both teach data transmission methods that make use of the program clock frequency and the network clock frequency to calculate synchronization signal for synchronizing the transmission of the data to the reception side of the system. Kawabata et al. teaches the deficiency of Itakura et al. by teaching the explicit method of sampling the program clock frequency and system frequency and then calculating a result based on the samplings.

As per claim 5 and 10, Itakura et al. and Kawabata et al. teach the claimed invention comprising:

dividing the first difference value by the second difference value to obtain the result
(Kawabata et al. teach the claimed invention in paragraphs [0176]-[0184] and Itakura et al. teach the claimed invention in Col. 8 line 61 – Col. 10 lines 24).

As per claim 6, Itakura et al. teach the claimed invention comprising:

sampling a program clock frequency is triggered by the sampling a system frequency
(Col. 4 lines 50-63).

As per claim 7, Itakura et al. teach the claimed invention comprising:

synchronizing the system frequency with a system frequency of a remote device via the communication link using a control protocol (Col. 4 lines 50-63 and Col. 6 lines 42-52 Itakura et al. does not explicitly teach using control protocol to synchronize the system frequency but it would have been obvious to one of ordinary art in the skill that control protocol is primarily used to synchronize the system frequency of a remote device.).

the sampling a program clock frequency is triggered by the sampling a system frequency.

As per claim 11, Itakura et al. and Kawabata et al. teach the claimed invention comprising:

generating a difference value from the first value and the second value, wherein the adjusting adjusts the program clock frequency based on the difference value (*Kawabata et al.*

5 *teach the claimed invention in paragraphs [0176]-[0184] and Itakura et al. teach the claimed invention in Col. 8 line 61 – Col. 10 lines 24).*

As per claim 12, Itakura et al. teach the claimed invention comprising:

changing a control voltage to an oscillator based on the difference value, or changing a numerical value to adjust a frequency of a local program clock oscillator, or changing a

10 frequency of a virtual clock if data re-sampling is used in lieu of program clock adjustment (*Col. 4 lines 50-63 and Col. 6 lines 42-52 Itakura et al. does not explicitly teach changing the numeric frequency of the program clock oscillator but it would have been obvious to one of ordinary skill in the art that changing the program clock oscillator would change the frequency of the program frequency to correct lag.)* .

15 *As per claim 14*, Itakura et al. teach the claimed invention comprising:

increasing the program clock frequency if the first value and the second value indicate that the program clock frequency lags behind the sending frequency, and decreasing the program clock frequency if the first value and the second value indicate that the sending frequency lags behind the program clock frequency (*Col. 4 lines 50-63 and Col. 6 lines 42-52 Itakura does not*

20 *explicitly teach increasing or decreasing the program frequency to correct lag but it would have been obvious to one of ordinary skill in the art that increasing of decreasing the frequency of the program frequency would correct a known frequency lag of the program clock frequency)* .

As per claim 15, Itakura et al. and Kawabata et al. teach the claimed invention comprising:

re-sampling the information based on a difference between the first value and the second value (*Kawabata et al. teach the claimed invention in paragraphs [0176]-[0184] and Itakura et al. teach the claimed invention in Col. 8 line 61 – Col. 10 lines 24*).

As per claims 16-26, it is directed at the device for sampling the program and system frequency and calculating a result to adjust the program frequency to synchronize the transmission of data. Since Itakura et al. and Kawabata et al. teach the claimed method, Itakura et al. and Kawabata et al. teach the claimed device to sample the program and system frequency and calculate a result to adjust the program frequency to synchronize the transmission of data

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean Weinman whose phone number is (571) 272-2744. The examiner can normally be reached on Monday-Friday from 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached on (571) 272-3667. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sean Weinman
Examiner
Art Unit 2115

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CHUN CAO
PRIMARY EXAMINER